

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A transmission method ~~capable of~~ for transmitting and receiving a data waveform signal and an a periodic information waveform signal among a plurality of devices by full duplex operation, comprising:

detecting variation points in a reception signal;

generating a clock to synchronize the reception signal based on an average interval between the detected variation points in the reception signal;

receiving the data waveform or information waveform signal based on the clock thus generated;

inserting, when the information waveform signal consecutively repeats a single pattern, a different pattern between the repeated single patterns before transmitting the repeated single patterns; and

transmitting said repeated single patterns having the inserted different pattern between the repeated single patterns;

~~wherein variation points of a reception signal are detected so as to generate a clock to synchronize the reception signal based on an average interval between the variation points, and the data waveform or information waveform signal is received based on the clock thus generated.~~

2. (Original) The method as set forth in Claim 1, wherein the plurality of devices refer to two devices.

3. (Previously Presented) The method as set forth in Claim 1, wherein the different pattern is inserted between the single patterns at a random interval.

4. (Previously Presented) The method as set forth in Claim 1, wherein the different pattern is inserted between the single patterns at a fixed interval.

5. (Original) The method as set forth in Claim 1, wherein the different pattern is a pattern which is randomly selected from a group consisting of a plurality of different patterns.

6. (Original) The method as set forth in Claim 1, wherein the single pattern is a code representing status information indicative of a state between devices.

7. (Original) The method as set forth in Claim 6, wherein the different pattern is a code different from the code representing status information.

8. (Original) The method as set forth in Claim 6, wherein the code representing status information is a code indicative of a stand by state.

9. (Previously Presented) The method as set forth in Claim 7, wherein a time period for receiving a code representing data of the data signal and a time period for receiving a code representing status information of the information waveform signal are distinguished from each other based on a reception signal, and the code representing data is adopted as a different code in a time period for transmitting the code representing status information.

10. (Original) The method as set forth in Claim 7, wherein, when a different code is received in the time period for receiving the code representing status information, a previously received code representing status information is maintained.

11. (Original) The method as set forth in Claim 6, wherein the code is a code in compliance with an 8B10B encoding system.

12. (Original) The method as set forth in Claim 1, wherein, when the single pattern to be consecutively repeated in transmission is changed into a pattern representing other

information at the same transmission timing as with the different pattern, the pattern representing other information is transmitted.

13. (Canceled).

14. (Currently Amended) The method as set forth in Claim 1, wherein the operation transmission method utilizes an optical signal.

15. (Currently Amended) A transmission method ~~capable of~~ for transmitting and receiving a data waveform signal and an a periodic information waveform signal among plurality of devices by full duplex operation, wherein two different types of codes respectively including reverse "1" and "0" correspond to a single type of information contained in the information waveform signal, comprising:

detecting variation points of a reception signal;

generating a clock to synchronize the reception signal based on an average interval between the variation points;

receiving a data waveform or information waveform signal based on the clock signal thus generated;

randomly varying an internal parameter from a list of control codes;

selecting one of the two types of codes; and

transmitting said selected one type of code in accordance with the internal parameter;

~~wherein variation points of a reception signal are detected so as to generate a clock to synchroize the reception signal based on an average interval between the variation points, and the data waveform or information waveform signal is received based on the clock thus generated.~~

16. (Canceled).

17. (Currently Amended) The method as set forth in Claim 15, wherein the operation transmission method utilizes an optical signal.

18. (Currently Amended) A transmission system ~~capable of~~ transmitting and receiving a data waveform signal and an a periodic information waveform signal among a plurality of devices by full duplex operation, comprising:

a receiver detecting variation points of a reception signal, generating a clock to synchronize the reception signal based on an average interval between the variation points, and receiving the data waveform or information waveform signal based on the clock thus generated;
and

a transmitter for transmitting a signal such that, when the information waveform signal consecutively repeats a single pattern, a different pattern is inserted between the repeated single patterns before transmitting the single patterns and the repeated single patterns having the inserted different pattern are transmitted;

~~wherein variation points of a reception signal are detected so as to generate a clock to synchronize the reception signal based on an average interval between the variation points, and the data waveform or information waveform signal is received based on the clock thus generated.~~

19. (Currently Amended) A communications device ~~capable of~~ transmitting and receiving a data waveform signal and ~~an~~ a periodic information waveform signal among a plurality of devices by full duplex operation, comprising:

a transmitter for transmitting the data waveform and information waveform signals; and

a receiver for receiving the data waveform and information waveform signals,
wherein:

the transmitter includes a random pattern generating section for randomly generating a pattern different from the information waveform signal, an identification signal generating section for generating an identification signal which indicates whether a signal to be transmitted is the data waveform signal or the information waveform signal, and a transmitting section for transmitting the data waveform or information waveform signal based on the identification signal, and

the transmitting section, when the identification signal is the information waveform signal and consecutively repeats a single pattern, transmits the information waveform signal after inserting a random pattern generated by the random pattern generating section into the information waveform signal,

wherein the receiver includes a bit synchronization circuit for detecting variation points of a reception signal and generating a clock to synchronize the reception signal based on an average interval between the variation points.

20. (Previously Presented) The communications device as set forth in Claim 19, wherein the receiver includes a signal judging section for judging whether a reception signal is the data waveform signal or the information waveform signal, and a setting section for setting a time period for receiving the data waveform signal and a time period for receiving the information waveform signal, in accordance with a result of judgment by the signal judging section.

21. (Canceled).